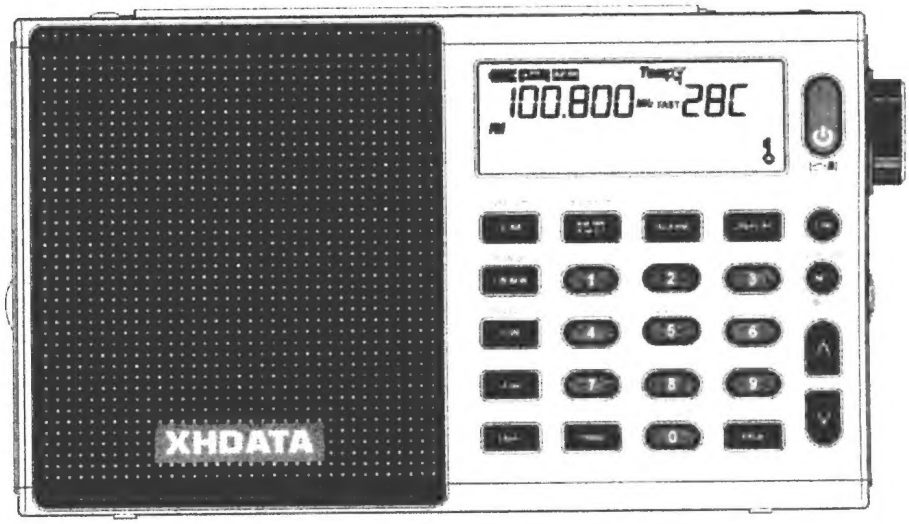
XHDATA

D808 Radio Manual

FM Stereo/LW/MW/SW SSB AIR RDS

Portable Digital Radio



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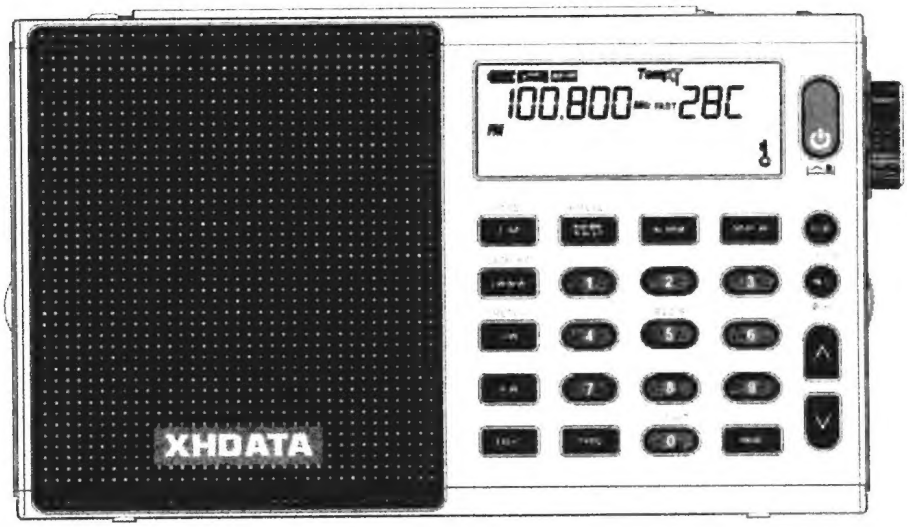
Radio - Front View



FM — FM Band Select/ATS/Set FM Range

LW/MW — MW/LW Band select / ATS / Enable LW

SW — SW Band select / ATS / Scroll through Meter bands

AIR — Air Band select / ATS

LIGHT — Display light on/off

AM BW / FM ST — AM Bandwidth/FM Stereo/ Time set

FREQ — Frequency entry follows

DISPLAY — Display option: Clock, Alarm, Signal strength, Temperature

PAGE — Memory page selection

ALARM — Alarm on / Alarm set

Power / Sleep timer

Single Sideband (SSB)

Upper / Lower Sideband select / RDS Info / Lock

Frequency up / Scan

Frequency down / Scan

1 — Frequency / Page / Memory

4 — Frequency / Page / Memory

7 — Frequency / Page / Memory

2 — Frequency / Page / Memory

5 — Frequency / Page / Memory / Beep set

8 — Frequency / Page / Memory

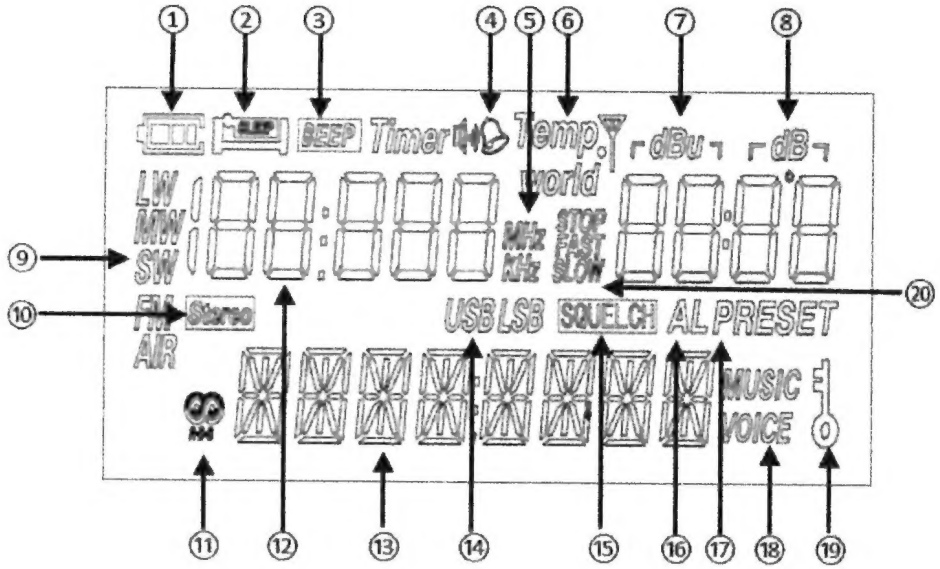
0 — Frequency / Page / Memory/ MW step

3 — Frequency / Page / Memory/Temp scale setting

6 — Frequency / Page / Memory

9 — Frequency / Page / Memory

Radio - Display



① Battery charge indicator

② Sleep timer active

③ Key press beep active

④ Alarm on

⑤ Frequency Display is kHz or MHz

⑥ Display temperature mode

⑦ Signal strength

⑧ Noise level

⑨ Band selection

⑩ FM Stereo signal

⑪ FM RDS available

⑫ Frequency

⑬ RDS Information

⑭ USB / LSB mode

⑮ Squelch active

⑯ Alarm active

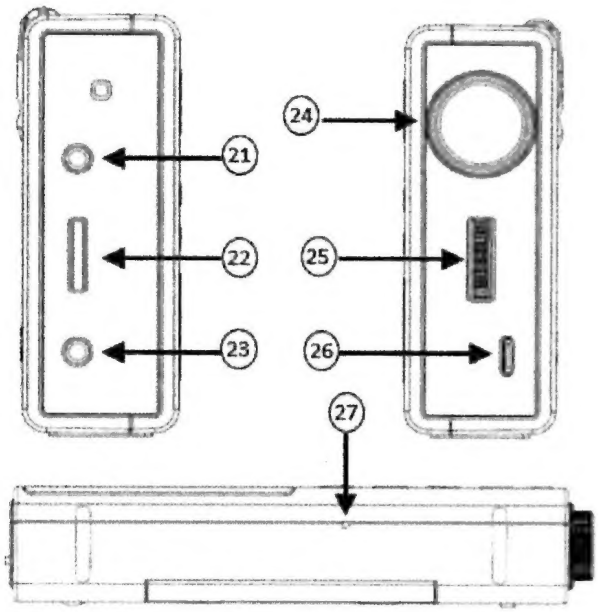
⑰ Station Memory Mode

⑱ Not available on this radio

⑲ Radio keys locked

⑳ Tuning knob speed

Radio - Side Controls



(21) External antenna jack (3.5mm)

(22) Volume control

(23) Headphone jack (3.5mm)

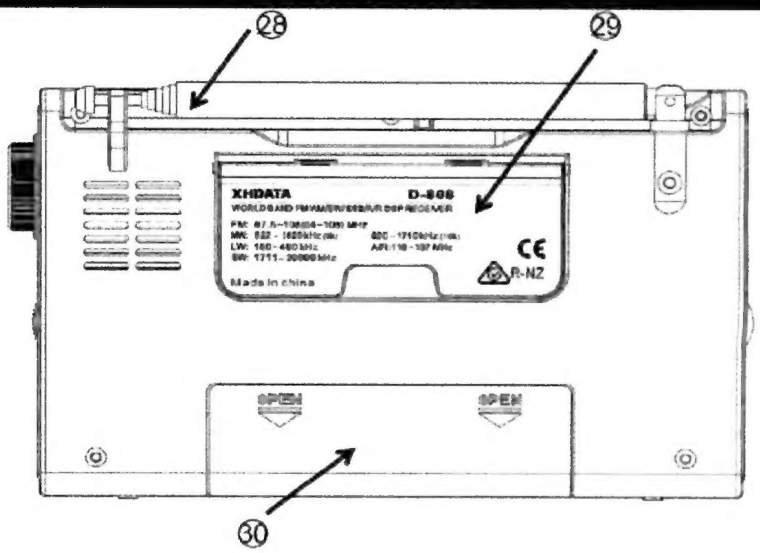
(24) Main Tuning knob(push in for FAST / SLOW / STOP)

(25) Fine tuning / clarify control for SSB

(26) USB Charging port

(27) Radio reset button access hole

Radio-Rear



(28) Whip antenna used for FM, SW and AIR bands

(29) Kickstand

(30) Battery door (18650 battery included)

Warning

- Do not expose the radio to water, moisture or excessive humidity.
- Operating temperature range is 0°- 40°C (32°—104°F).
- Remove the battery immediately if liquid has been spilled or debris have fallen into the unit .
- Clean with a dry cloth. Don' t use detergents or chemical solvents.
- Do not attempt to open the unit. This prevents damage to sensitive components.

QUICK START GUIDE

• When the battery is fully charged, the battery will power off automatically. If the screen doesn't display, please take the battery out and install again, or charge for the radio until the screen display.

• In this manual, the terms "**press**" and "**long press**" are used. "Press" means to press the button briefly. "Long press" means to press the button and hold it for 2 seconds. When making settings, wait a few seconds after making the setting and the radio will save the setting and exit setting mode.

1. Install 1 x 18650 battery in the battery compartment, taking care to align the polarity of the battery (+/-) .
2. Turn on the radio by pressing the **[POWER]** button and then press any button to skip the sleep time setting.
3. Adjust the volume by rotating the **[VOLUME]** knob on the left side of the radio. Rotate the small wheel up for more volume and down for less volume.
4. Select band by pressing the band button —— FM, MW, SW or AIR Band.
5. Rotating the **[TUNING]** knob on the upper right side to locate a desired station or by directly tuning to a station:
   a) First, select a band — FM,MW,SW or Air Band.
   b) Quick press the **[FREQ]** button
   c) Enter the frequency on the keyboard
   d) If the radio does not tune to the frequency, press **[FREQ]** button again to complete the entry.

FUNCTIONS & OPERATIONS EXPLAINED

Options and Setup

1. FM Tuning range—— [FM] button

The radio can be set for different tuning ranges that are convenient for FM broadcasting in different regions of the world. With the radio off, long-press the **[FM]** button. The current setting, showing the lowest frequency of the band, is displayed.

To change the setting, press the FM button again to cycle through the four options:

- 64.0 MHz
- 76.0 MHz
- 87.0 MHz
- 87.5 MHz

2. Medium Wave Step——[9/10 kHz] button

The tuning step for medium wave (MW) can be set for 9 kHz or 10 kHz. To change the setting, turn the radio off and long-press the **[9/10 kHz]** button **(number 0)** ,and then press the button again to switch the two options, the current setting is displayed.

3. Long wave——[LW / MW] Button

The LW band is not enabled by default. To enable it, turn the radio off and long press the **[LW/MW]** button. The radio will display the current status of the setting, "LW ON" or "LW OFF". To change the setting, press the **[LW/MW]** button.

When LW is enabled , pressing the **[LW/MW]** with the radio on selects either the LW or MW band. When it is disabled, the LW option is not available.

4. Temperature——[DISPLAY] Button and [number 3]

The temperature scale for display, Fahrenheit or Centigrade, may be selected. With the radio off, repeatedly press the **[DISPLAY]** button until the temperature is displayed, then long-press the **[number 3]** to change the setting. Repeatedly press the button to toggle between °F and °C.

5. Setting the time——[TIME SET] Button

The radio clock supports 24-hour time display only.

To set the clock, turn the radio off and long press **[TIME SET]** button . The radio will display "TIME" Key in the 4-digit time to set. Note that time setting mode automatically exits after about 5 seconds with no key pressed.

The radio has the option to automatically set the time from an FM broadcast station that provides it (refer to the RDS topic for more on this). To enable automatic setting, press the **[TIME SET]** button with the radio off. Use the [UP arrow] key to switch between Auto and Manual modes.

(Note: Many FM stations do not broadcast time, and those that do may not be accurate. You must manually tune the station with time information for the time to be set from RDS.)

6. Setting the alarm——[ALARM] Button

With the radio turned off, long press the **[ALARM]** button. Use the 0-9 keys to directly enter the alarm time.

Quickly press the **[ALARM]** button, then the "ALARM" icon will flash. Press the [Up Arrow] or [Down Arrow] button to select the way the alarm rings:

① Radio Broadcast Alarm ② Buzzer Alarm ③Alarm off.

· Buzzer Alarm: By default, the radio will sound a buzzer when the alarm time is reached.

· Radio Broadcast Alarm : A speaker icon will appear on the screen, indicating that the alarm will play the last radio station tuned when the alarm time is reached.

When the alarm goes off, press the **[Power]** button to turn off the alarm or press any other button to sleep for another 10 minutes.

7. Setting the sleep timer——[POWER] Button

To use the Sleep Timer, quick press the **[POWER]** button. The Sleep Timer will automatically shut off the radio after the set amount of time expires. The display will cycle through minutes 120, 90, 60, 45, 30, 15. Setting the value to "ON" turns off the Sleep Timer.

8. Beep——[BEEP] button

The radio as it comes from the factory beeps after each key press. To disable this, turn the radio off and long-press the **[BEEP]** button **(number 5)**. Long press the button to change the option.

9. Display light——[LIGHT] button

The display is automatically illuminated for about 10 seconds when you press a key or turn the tuning knob. Pressing the **[LIGHT]** button turns it on indefinitely. When set, the light stays on even when the radio is turned off. Press [LIGHT] button again to turn the display lighting off.

10. Lock——[INFO] button

With the radio on or off, long press the **[INFO]** button to disable the other keys on the radio. Long press again to re-enable them. This feature is useful to prevent the radio from being turned on accidentally.

11. Antennas

Antennas capture radio signals that are processed by the radio. This radio has 3 antenna options:

- Internal ferrite bar antenna used for LW/MW
- A 25.5" telescopic whip antenna for SW/FM/AIR
- A 3.5mm jack to connect an external antenna of your choice for SW/FM/AIR

Caution: Ensure that an external antenna is clearfrom power lines.

The internal ferrite bar antenna is directional. Physically turn the radio for best reception. You may find that moving the radio to a different location, even slightly, greatly improves reception on all bands.

Radio operation

1. Search Radio Frequency

① Manual Search

Turn the **[Tuning]** knob to change the frequency, Turn the **[Fine Tuning]** thumb wheel to fine-tune the frequency in smaller steps, or press the **[Up or Down Tuning Arrow]** to change the frequency.

Note: Tuning speed

The tuning knob has FAST, SLOW and STOP modes. Switch between them by pressing the **[Tuning]** knob in towards the radio. The display shows the mode in small print.

- Fast - advance 5 kHz (3 kHz on LW, 9/10 kHz on MW, 25kH on AIR and 100 kHz on FM)
- Slow - advance 1 kHz (10 kHz on FM)
- Stop - does not advance

② Auto Search

• ATS Function

Avoid areas with high electromagnetic interference when using the ATS function to obtain more accurate search results. Noise, such as from desktop computers can be confused with a radio station.

Long press a band button **([FM], [LW/MW], [SW], [AIR])** and the screen displays "ATS_ _ _" to enter the automatic search mode. In this mode, the radio will automatically search all frequencies in the band and store all strong signals in the memory station.

(Note: strong signals are not necessarily generated by broadcast towers, they may also be strong interference signals.)

• **Up and Down Tuning Arrow**

To search the frequency band starting with the current frequency:
Select the desired frequency band, then long press the **[Up or Down Tuning Arrow]**, the radio will start searching the selected frequency band, forward or backward, and stop searching after locating for a strong signal. Short pressing the **[Up or Down Tuning Arrow]** will also stop the search.
(Note: Stations found in this search are not stored in the station memory.)

③ **Directly input the radio frequency**

Press **[FREQ]** button to enter the keyboard input radio mode, enter the radio station you want to search through the numeric keypad, and press [FREQ] button again to confirm. The frequency band will jump to the frequency band you entered.
(Note: If the entered radio frequency does not exist in this band, the screen will display an Error symbol.)

2. **Memory System**

• **Manual**

A memory location stores the station frequency along with the stereo setting for FM and the bandwidth for LW/MW/SW.
This radio has 500 memory locations, 100 for each band, organized into 10 pages with 10 memory locations each. Therefore, the storage location of each radio station is "page (0-9) -code number (0-9)", for example "P18" refers to the 8th slot on page 1.
Select the desired band (FM, MW, LW, SW or AIR) first. Then to save or retrieve a station in memory, first establish the current memory page by pressing the **[PAGE]** button and then pressing the page number button (0-9). Once a page is selected, a frequency is stored to a memory location within the page by long pressing the position number button (0-9). After the station is successfully saved, the radio will display "PAGE—SAVE".
(NOTE: To recall a saved station, just press the number button (0-9) of the memory position within the current page. After the station is successfully retrieved, the radio will display " PAGE—LOAD".)

• **Auto Tune Storage (ATS)**

This radio has the capability to scan the bands and automatically store stations into memory. It loads them sequentially by page, and by position within the page, overwriting any previously stored stations. ATS is invoked by first selecting the band and then with a long press of the band button, FM, LW, MW, SW or AIR. ATS stores relatively stronger stations, and may skip some that are barely audible.

Note that for shortwave, the radio only scans within the international broadcast frequencies, not amateur radio or commercial bands. Refer to the SW topic.

3. Bandwidth (BW)

While radio signals are centered on one frequency, they actually occupy a range of frequencies. Sometimes two stations with adjacent frequencies can interfere with each other. This problem can be lessened by reducing the frequency range (bandwidth) the radio tunes. This feature is available on LW, MW and SW on this radio, but typically only used on SW.

The bandwidth is selected by pressing the **[AM BW]** button. The width is shown on the display ,and repeated presses of the button will cycle through the values: 6, 4, 3, 2.5, 2, 1.8 and 1 kHz .The bandwidths in SSB mode are 4, 2, 2.2, 1.2, 1, and 0.5 kHz.

Generally, the higher the bandwidth, the better the audio fidelity and the lower the bandwidth, the lower the interference and noise.

4. Squelch Function

Press the **[Tuning]** knob for about 5 seconds, squelch mode will start. Squelch Mode works on all bands.

When set, the radio remains silent until a transmission stronger than the set level is received. To activate the feature, long press the tuning knob inwards, and when the word "Squelch" appears in the display immediately rotate the tuning knob to begin setting the squelch level. The values are 1-9 and OFF. The higher the number, the stronger the signal must be to activate the radio. The optimum level is usually the highest number without background noise. Turning squelch off may enable reception of weak signals that would otherwise not be heard.

(Note: If you find your radio not receiving any signals, check to make sure the squelch is not turned on unintentionally.)

5. Display Mode

The display can be set to show different information; press the **[DISPLAY]** button to cycle between signal strength/signal to noise ratio, time, temperature and alarm time. Signal strength is expressed in dBu units, the larger the number, the stronger the signal. The signal to noise radio is expressed in dB units; the larger the number, the greater the signal quality, with a value of 0 indicating that signal and noise are equal. The value is also shown as 0 when there is no signal at all.

6. FM Reception

To receive FM broadcasts, fully extend the whip antenna and press the **[FM]** button.

Here are your tuning options:

1. Press **[FREQ]** button, enter the frequency of the station, and press [FREQ] button again.
2. Long press the **[FM]** button to activate ATS to store all strong stations into memory (see section on the Memory system for how to access them).
3. Press the **[Up or down arrow]** keys to go to the next frequency.
4. Long press the **[Up or down arrow]** to scan for the next strong station.
5. Rotate the tuning knob to tune stations.

FM STEREO

Some FM stations broadcast in stereo. In this case, STEREO appears on the display. Listening to the two stereo channels requires stereo headphones. Stereo can be turned off and on with the **[FM ST]** button. It may be automatically disabled for a weak signal. In some situations, you may get improved reception by turning stereo off. The stereo setting is stored in the station memory when the frequency is saved.

7. FM RDS (radio data system)

RDS is a means for FM radio stations to transmit data along with their programming. Not all FM stations employ RDS, but the ones that do typically transmit the station name, the station type, the song artist and title when playing music, and occasionally the time. When RDS is present, the RDS icon on the display is shown and the RDS data information appears at the bottom of the display. Use the [INFO] button to cycle through the RDS data options. This radio supports the following RDS information:

- PS—Program Service Name
- DATE—Date and Time ("NO DATE" if not present)
- PTY—Program type: News, Drama, Rock music... ("NONE" if not present)
- RT— Radio Text may contain artist and title information for music ("NO RT" if not present)

RDS date information can be used to automatically set the radio clock. Refer to the Clock Setting topic for additional information.

8. MW (medium wave)

To receive MW broadcasts, press the **[LW/MW]** button. Here are your tuning options:

1. Press **[FREQ]** button, enter the frequency of the station, either 3 or 4 digits.
2. Long press the **[LW/MW]** button to activate ATS and store all strong stations into memory (see section on the Memory system for how to access them).
3. Press the **[Up or down arrow]** to go to the next frequency.
4. Long press the **[Up or down arrow]** to scan for the next strong station.
5. Rotate the tuning knob to tune stations.

Rotate the radio for the best reception. Refer to the Antenna topic for more information.

9. LW (long wave)

Long wave reception initially defaults to 'off'. Refer to the Settings topic to learn how to enable it. With the radio turned off, pressing the **[LW/MW]** button when long wave is enabled switches between the two bands. The display shows the selected band.

Here are your tuning options:

1. Press FREQ, enter the frequency of the station.
2. Long press the **[LW/MW]** button to activate ATS to store all strong stations into memory (see Memory system topic for how to access them).
3. Press the **[Up or down arrow]** to go to the next frequency.
4. Long press the **[Up or down arrow]** to scan for the next strong station.
5. Rotate the tuning knob to tune stations.

Rotate the radio horizontally for the best reception. Refer to the Antenna topic for more information.

10. SW (shortwave)

Fully extend the whip antenna and press the [**SW**] button to select the shortwave function and tune to the previously accessed shortwave frequency. Repeated presses of the button cycle through the 14 international shortwave broadcast bands The display shows which meter band is selected briefly after the button is pressed.

The bands are:

- 120m (2300 - 2495kHz)
- 90m (3200 - 3400 kHz)
- 75m (3900 - 4000 kHz)
- 60m (4750 - 5060 kHz)
- 49m (5730 - 6200 kHz)
- 41m (7100 - 7300 kHz)
- 31m (9250 - 9900 kHz)
- 25m (11500 - 12160 kHz)
- 22m (13570 - 13870 kHz)
- 19m (15300 - 15800 kHz)
- 16m (17480 - 17900 kHz)
- 15m (18900 - 19020 kHz)
- 13m (21450 - 21850 kHz)
- 11m (25670 - 26100 kHz)

Note: The frequency range of the shortwave band is stipulated by international organizations such as the International Telecommunication Union (ITU). Although these ranges are relatively fixed, they may be adjusted according to the needs of different countries and regions.

Here are your tuning options:

1. Press [**FREQ**] **button** and enter the frequency of the station. You may need to press [**FREQ**] button again to complete.
2. Long press the [**SW**] button to activate ATS to store all strong stations into memory (see Memory System topic for how to access them). Note that only the stations within the 14 international shortwave bands are scanned.
3. Press the [**Up or down arrow keys**] to go to the next frequency.
4. Long press the [**Up or down arrow keys**] to scan for the next strong station.
   Note that only the 14 international shortwave bands are scanned.
5. Rotate the tuning knob to tune stations. Position the radio for the best reception. Refer to the Antenna topic for more information.

11. Single Side band (SSB)

To decode shortwave SSB signals on this radio, first tune the station for the strongest signal. Then press the SSB button, the display will show the side band setting, either upper side band (USB) or lower side band (LSB). In SSB mode, the INFO button switches between the two side bands. LSB is most often used for frequencies below 7300 kHz and USB for those over 14000 kHz, with exceptions.

Refer to the Bandwidth topic for how to improve shortwave reception.

To exit SSB mode, press the SSB button again and the radio will display " NORMAL".

12. Fine Tuning

In SSB mode, use the **[FINE TUNE]** knob on the right side of the radio. Turn it upward and the screen will display "FINE 1+99"; turn it downward and the screen will display "FINE 1-99", which is a function for fine-tuning the frequency. The numeric value is the offset +/- from the displayed frequency.
In other band modes, rotate the **[FINE TUNE]** knob to make slight adjustments to the frequency or to try to reduce interference from adjacent stations.

13. AIR Band

To receive aviation transmissions, fully extend the whip antenna and press the AIR button.
Here are your tuning options:

1. Press **[FREQ]**, enter the frequency of the station, and press **[FREQ]** again if necessary.
2. Long press the **[AIR]** button to activate ATS to store all strong stations into memory (see section on the Memory system for how to access them).
3. Press the **[Up or down arrow]** to go to the next frequency.
4. Long press the **[Up or down arrow]** to scan for the next strong station.
5. Rotate the **[Tuning]** knob to tune stations. Air band is best received near airports. You can look up the approach frequency for your closest airports online and set the radio for these frequencies.

14. Reset

Should the radio become inoperable, you may attempt to reset the radio by pushing a small object such as a paperclip into the Reset hole until you feel a click.
Take care not to press too hard and damage the radio.
Note: The reset hole is located on the bottom of the radio.

• Other Operations

1. Earphone Jack

For private listening, use headphones or earbuds.

2. DC Jack

You can power your radio with a correct pins and polarity of AC wall adapter via this DC jack. Please make sure the DC volt is the same as marking on the radio. Otherwise the radio will not work or may be damaged.

3. External Antenna Jack

Connect an external antenna with this 3.5 mm phone jack to improve the reception on FM, SW and AIR Bands.

4. Back Stand

Flip the panel out to prop up your radio for easy use of control, best audio and for viewing positioning.

Specifications

Radio bands:	
FM:	64 - 108 MHz
AM(MW):	520 - 1710 kHz
SW:	1711 - 29999 kHz
LW:	150 - 450 kHz
AIR:	118 - 137 MHz
Sensitivity:	
FM:	> 3 μV
AM(MW):	0.5 mV/m
SW:	10 mV/m
LW:	10 μV
AIR:	0.5 μV
AM Selectivity:	> 80dB
Number of memories:	500 (100 per band)
Battery:	1 x 18650
DC input voltage:	5V
Speaker:	8Ω 1 W
Earphone Jack:	3.5mm
Dimensions:	157(W) x 92(H) x 32(D) mm
Weight:	265g (without battery)
Accessories:	1 x storage bag 1 x external antenna 1 x Type-C charging cable 1 x 18650 battery 1 x English user manual

XHDATA

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